

Accelerated Site Deployment of the Brokk Remote Concrete Demolition System

Brokk is a well-established technology used extensively for standard demolition. It may be operated remotely and the articulated, hydraulic boom is adaptable to a variety of attachments. The hydraulic hammer operates at 600 ft.-lb cycling at 1000 to 1500 beats per minute. The optional excavation bucket has a 1/4 yd³ capacity with a smooth cutting edge. Other attachments include a concrete crusher, a La Bounty Shear, and a 1/4 yd³ capacity clamshell bucket. Brokk's remote capability exceeds 400 ft and can be operated from a different room with a TV monitor. The unit requires a 480v, 50 amp power source.



Application: The Brokk will be deployed at the CP-5 Reactor at ANL-East to remotely dismantle the bioshield. Follow up deployments include:

- TAN-620 at INEEL
- Building 301 Hot Cells at ANL-East

Benefits: LSDDP experience suggests Brokk deployment has potential when compared to baseline technologies like manual cutting and jack hammers to significantly:

- Reduce demolition time and cost
- Reduce worker exposure

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Site Needs Supported:

Chicago - DD05-99 = Size Reduction of Large Concrete Structures

Idaho - ID-7.2.07, 08, 12, and 13 = Remote Demolition and Cutting

Richland - RL-DD08 = Remote Cutting

Savannah River - SR99-4001 and 4408 = Dismantlement of Concrete and Piping

Ohio (Fernald) - OH-F010 and OH-F027 = Pipe, Conduit and Equip. Dismantlement

Funding to Achieve Savings

(\$'S X 1000)	<u>FY99</u>	<u>FY00</u>	<u>TOTAL</u>
EM-40	2,200	600	2,800
ASTD	611	70	681
TOTAL	2,811	670	3,481

Cost Savings Summary

Activity Cost

(x1000)

Baseline	CP-5 Bio-Shield	\$3,252,000
	Bldg. 301 Hot Cells	\$1,270,000
	TAN-620	\$1,093,000
	TOTAL	\$5,615,000
ASTD	CP-5 Bio-Shield	\$2,104,000
	Bldg. 301 Hot Cells	\$670,000
	TAN-620	\$707,000
	TOTAL	\$3,481,000
POTENTIAL SAVINGS		\$2,134,000

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Schedule Acceleration Opportunities

PROJECT	Baseline*		Accelerated		Schedule Reduction
	Start	End	Start	End	
<u>ANL</u> (CP-5 Biological Shield)	7/99	5/00	11/98	9/99	10 months
<u>ANL</u> (Bldg. 301 Hot Cells)	11/00	5/02	2/00	2/01	15 months
<u>INEEL</u> (TAN 620)	4/99	10/99	3/99	6/99	3 months
ASTD TOTAL SCHEDULE ACCELERATION = 28 months					

*Baseline schedule from "Accelerated Cleanup: Path to Closure"

Current Status: Funding availability and schedule performance under evaluation

**Points of
Contact:**

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